Patent claims

1. An electrode which has the capacity to store hydrogen, having a metallic substrate material, to which an active compound is applied, characterized in that the active compound is obtainable from a paste which comprises a dry fraction and a liquid fraction, the dry fraction comprising a mixture of a pulverulent storage alloy for hydrogen, soot and polytetrafluoroethylene (PTFE), the particles of the storage alloy being covered with PTFE in the manner of fibrils, and the liquid fraction comprising a mixture of water and a higher alcohol which has from 3 to 6 C atoms.

2. The electrode as claimed in claim 1, characterized in that the dry fraction includes approximately 85 to 95 parts of the storage alloy for hydrogen, 2 to 10 parts of soot and 3 to 8 parts of PTFE.

3. The electrode as claimed in one of the preceding claims, characterized in that the liquid fraction contains 30 to 70 parts by volume of water and 70 to 30 parts by volume of the alcohol, as well as 0.05 to 0.2% (based on the dry fraction) of PEG.

4. The electrode as claimed in one of the preceding claims, characterized in that the liquid fraction also contains polyethylene glycol (PEG).

5. The electrode as claimed in claim 4, characterized in that the PEG has a molecular weight of between 10^5 and $5x10^6$g/mol.

6. The electrode as claimed in one of the preceding claims, characterized in that the liquid fraction contains n-propanol and/or n-butanol as alcohol.

7. The electrode as claimed in one of the preceding claims, characterized in that the mass ratio of the dry fraction to the liquid fraction is 4:1 to 6:1.

8. A method for producing the electrode with storage capacity as claimed in one of claims 1 to 7, characterized in that a dry fraction comprising a mixture of a storage alloy for hydrogen, soot and polytetrafluoroethylene (PTFE) and a liquid fraction comprising a mixture of water and a higher alcohol which has 3 to 6 C atoms are used, the dry fraction and the liquid fraction are mixed in a kneading machine until a cohesive paste is formed, and the resulting paste is combined with a metallic substrate material and is dried.

9. The method as claimed in claim 8, characterized in that a mixture comprising approximately 85 to 95 parts of the storage alloy for hydrogen, 2 to 10 parts of soot and 3 to 8 parts of PTFE is used as the dry fraction.

10. The method as claimed in one of claims 7 to 9, characterized in that a mixture comprising 30 to 70 parts by volume of water and 70 to 30 parts by volume of the alcohol, as well as 0.05 to 0.2% (based on the dry fraction) of PEG is used as the liquid fraction.

11. The method as claimed in one of claims 7 to 10, characterized in that a mixture which also contains polyethylene glycol (PEG) is used as the liquid fraction.

12. The method as claimed in claim 11, characterized in that PEG with a molecular weight of between 10^5 and $5x10^6$ g/mol is used.

13. The method as claimed in one of claims 8 to 12, characterized in that n-propanol and/or n-butanol is used as alcohol.

14. The method as claimed in one of claims 8 to 13, characterized in that the dry fraction and the liquid fraction are mixed in a mass ratio of approximately 4:1 to 6:1.

15. The method as claimed in one of claims 8 to 14, characterized in that the resulting paste is compressed to form a sheet, preferably by rolling, and this sheet, after drying, is combined as active compound with the substrate material.

16. The method as claimed in one of claims 8 to 14, characterized in that the resulting paste is applied directly to the substrate material, preferably by rolling, and is then dried in order to obtain the active compound.

17. The use of the electrode as claimed in one of claims 1 to 7 as negative electrode in alkaline storage batteries with positive nickel oxide electrode.